REMARKS

The only reason for the structure shown in the cited reference to Moore is to diffuse doping of the lower electrode into the phase change material. The idea is to controllably mix metal and chalcogenide to generate a different kind of memory based on metal ion conduction. Thus, the resulting memory is not really a phase change material and the aim is to contaminate the phase change material with the metal from the lower electrode.

The claimed invention relates to a more conventional phase change memory design in which the lower electrode has no effect in contaminating the phase change material. Given that situation, there is simply no reason to provide the design of Moore in a conventional phase change memory.

As amended, the claims call for the creation of a planar upper electrode and a phase change material uncontaminated by the metal of the lower electrode. There is no reason to produce such a structure in Moore other than to facilitate the contamination of the phase change material. In contrast with the claimed invention, a totally encapsulated pore can be formed that facilitates the formation in a planar upper electrode. Moreover, the volume of phase change material, uncontaminated by any material from the underlying electrode, can be kept small to improve the performance of a phase change memory.

In view of these remarks, the claims as amended should now be in condition for allowance.

Respectfully submitted,

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